Ionizing radiation biomarkers in epidemiological studies – An update

Article (Supplemental Material)

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| **Cytogenetic biomarkers (dicentrics/chromosome aberrations)** | **Chromosomal rearrangements** | **Micronucleated reticulocytes** | **Radiation induced DNA lesions** | **gammaH2AX** | **Circulating DNAs** | **Radiation induced mutation profile** | **Changes in RNA profiles** | **Radiation induced alternative splicing** | **Changes in protein profiles** | **Radiation induced protein post-translational modifications** | **miRNA and non-coding RNAs expression profiles** | **Epigenetic markers** | **RedOx imbalance** | **Metabolomics** | **Biophysical markers** | **Mitochondrial biomarkers (oxidation/phosphorylation)** | **Mitochondrial biomarkers (common deletions)** | **Biomarkers of internal exposure (radio-isotopes)** |
| Detectable | Potentially detectable | Not reported | Detectable | Potentially detectable | Not reported | Detectable | Potentially detectable | Not reported | Detectable | Potentially detectable | Not reported | Detectable | Potentially detectable | Not reported | Detectable | Potentially detectable | Not reported | Detectable | Potentially detectable | Not reported | Detectable | Potentially detectable | Not reported |

**Fig 3: Biomarker detectability with time**